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ABSTRACT

This module on owning and operating a dairy farm is one of 36 in a series on entrepreneurship. The introduction tells the student what topics will be covered and suggests other modules to read in related occupations. Each unit includes student goals, a case study, and a discussion of the unit subject matter. Learning activities are divided into individual activities, discussion questions, and a group activity. Units (and subject matter) in this module are planning your business (personal qualities; products and customers; legal requirements); choosing a location (distance from town; amount of land needed; water; buildings and equipment); getting money to start (description of business; statement of financial need); being in charge (dividing the work; hiring a worker); setting prices (operating expenses; profit needed or wanted; demand for products; competition); marketing farm products (marketing process; marketing milk; the price of milk); keeping farm records (record of milk sales; record of expenses; records on the herd); buying and keeping track of supplies (choosing suppliers; ordering supplies; inventory card); and keeping your business successful (profit and loss statement; profit ratio and expense ratio; increasing net profits). A summary and quiz complete the document. (A teacher's guide is available for this module.) (CT)

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Entrepreneurship Training Components

GETTING DOWN TO BUSINESS:

Dairy Farming

Module 6

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American Institutes for Research

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GETTING DOWN TO BUSINESS:

Dairy Farming

Susan L. McBain

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INTRODUCTION

How are you going to use your job skills after you finish school?

Have you ever thought about starting your own dairy farm?

This module describes people who have started and managed a dairy farm. It gives you an idea of what they do and some of the special skills they need.

You will read about:

- planning a dairy farm
- choosing a location
- getting money to start
- being in charge
- buying and keeping track of supplies
- setting prices
- marketing farm products
- keeping farm records
- keeping your business successful

You will also have a chance to practice some of the things that dairy farm owners do.

Then you will have a better idea of whether a career as a dairy farm owner is for you.

Before you study this module, you might want to read Module 1, Getting Down to Business: What's It All About?

When you finish this module, you might want to read

- Module #2 Getting Down to Business: Farm Equipment Repair;
- Module #3 Getting Down to Business: Tree Service;
- Module #4 Getting Down to Business: Garden Center;
- Module #5 Getting Down to Business: Fertilizer and Pesticide Service.

These modules are related to other agricultural businesses.

UNIT 1

Planning a Dairy Farm

Goal: To help you learn how to plan a dairy farm.

Objective 1: List three personal qualities a dairy farm owner might have.

Objective 2: Describe the products and customers of a dairy farm.

Objective 3: List one legal requirement for running a dairy farm.

ANDY RAITT PLANS A DAIRY FARM

Andy Raitt works on a dairy farm. He's 27 and has worked there for the past five years. He likes it a lot. He likes working with animals and working on his own. He likes the business end too, keeping records and buying supplies.

His wife Julie, a quilt maker, also likes living in the country. She has had enough success with her art that she sells a number of quilts a year. She also has a very large garden and raises all kinds of vegetables.

They've been thinking about having their own farm. Andy says, "I know we can't buy a place for a while. But maybe we could lease some land from someone and then buy it in a few years. We want to start out with about 40 cows. Julie will sell some of her vegetables along the road and still have some time to quilt.

"I'd have to be around the farm almost all the time. But I don't mind that. It's worth it to be my own boss."

The more they think about having their own farm, the more excited they get. Andy and Julie talk about it a lot. They talk to people at their dairy association to find out where more dairies are needed.

Andy and Julie decide to go ahead and do it. Andy talks to people at the state health department about requirements for dairy farms. He also talks to a lawyer.

Julie talks to an insurance agent about what kinds of insurance they need. They try to plan carefully so the business will be off to a good start.

Planning a Dairy Farm

There are many, many small businesses in America. Small businesses can have as few as one worker (the owner) or as many as four workers. A small business owner is "self-employed." Often a whole family works together in a small business.

Andy and Julie have thought about three main things in planning their dairy business. First, they have decided their personal qualities are right for the business. Second, they have thought about what they would raise and who their customers might be. Finally they have learned about the legal requirements for running a dairy.

Personal Qualities

Before they start looking for land for their dairy, Andy and Julie have to think about themselves. They have to be sure they "have what it takes" to run a dairy business.

First, they need skills at running the dairy. They have to know about caring for the herd, using milking equipment, and running the farm. They also need business skills to keep the dairy making money.

Second, they must like working on a farm. They must like working with animals and with the soil. They should be able to work without a lot of people around.

Third, they should like staying around home. Dairy farmers don't get away from the farm for too long. Cows need to be milked every day and watched for health problems.

Finally they must want to be their own bosses. They will need to work very hard to make the business succeed. They have to be good at solving problems because they will be the ones in charge. They have to really like "doing their own thing."

Products and Customers

Products. The main product of dairy farms is, of course, milk. Dairy farmers usually don't sell their milk directly to customers. They sell it to the dairy association or to processing plants. These groups then process the milk, ship it, and sell it to customers.

Dairy farmers can also produce other agricultural products. Many dairy owners sell the calves they don't want to keep. Some farmers raise stock cattle to sell. Some sell hay and grain when they raise more than they need to feed their herds.

Other dairy farmers raise other livestock or poultry. Some sell the eggs as well as the poultry. And some farmers sell produce from their own fields and orchards.

Compared to other kinds of farming, dairy farming is a pretty steady business. Things like drought and hailstorms don't worry dairy farmers as much as they worry crop farmers. Yet even so, it's nice for a farmer to have more than one product to sell. If things don't go well for one product, the farmer can still bring in some money with the other. In planning your dairy business, you should decide what products you'll want to sell.

The Raitts have decided to sell mostly milk. But they will also sell calves, hay and grain, and vegetables.

Customers. A dairy farm's customer for milk is the dairy association or the milk processing plant. Calves, stock cattle, and hay and grain can be sold to other farmers through auctions and direct sales.

Eggs and produce can be sold to customers passing by. Some dairy farmers set up roadside stands to sell small amounts of these products, as Julie planned to do.

Legal Requirements

The Raitts decide to start their business as a sole proprietorship.. This means that they would get to keep all the profits of the dairy business. However, they would also be responsible for all debts if the business fails.

There are other legal forms of business, and it's important to know what would be best for your business. Andy and Julie talked to a lawyer to find out.

Andy found out about state health department requirements for dairies. The U.S. Department of Agriculture also has requirements. The standards for purity of the milk are very high. Every batch of milk must be tested to be sure it is pure. These standards protect the health of everyone who drinks milk, and that's a lot of people!

Summary

It is important to plan ahead before starting a business. Now you know the kinds of products and customers a dairy farm has.

Learning Activities

Individual Activities

1. Would you like running a dairy farm? Check each statement below that fits you.

   _____ I'm good at caring for animals and plants.

   _____ I like to work by myself.

   _____ I don't mind staying "close to home."

   _____ I really like being in charge of what I do.

   _____ I'm interested in how a business is run.

2. Find out what dairy farms are in your area. Are any of them small businesses (no more than four workers)?

3. Make a list of other products a dairy farm could offer.

Discussion Questions

1. In much of the country, farm operations are getting bigger and bigger. Why do you think this is happening?

2. Do you think small dairies still have a chance when farms are getting bigger?

3. What problems could Andy and Julie face if their business fails?

Group Activity

Talk to the owner of a dairy farm. Ask the person to come and talk to the class. Ask her or him to talk about what it's like to be a dairy farmer.

Plan what questions you will ask. You might ask questions like these.

1) What does your farm produce?
2) What is your day like? What do you do in a day? How many hours do you usually work a day? A week?
3) What experience and training do you have for your job?
4) What are the good and bad parts of your job?
5) Why did you want to start your own dairy business?
6) How long did you plan before you opened?
7) How much money did it take to get started? Where did you get it?
8) What kinds of records do you keep?
9) What would you suggest to someone who wanted to start a dairy farm?

UNIT 2

Choosing a Location

Goal: To help you learn how to choose a location for a dairy farm.

Objective 1: List three things to think about in deciding where to locate a dairy farm.

Objective 2: Pick the best location for a dairy farm from three choices.

ANDY AND JULIE DECIDE WHERE TO LOCATE

On Andy's days off, Julie and Andy go out looking at land near their area. They think they'd need about 40 acres to start their dairy. They drive as far as 200 miles from home to look at land.

They don't want to get too far away from a milk plant, which will be their "customer." They do want land somewhat out of town, though, where the zoning is right and the land is a little less expensive.

They find two areas where the dairy association is willing to accept more milk. In each area they talk to a farmer who is willing to lease them some land. The first one will lease them 40 acres for $4,000 a year. The land has a house and barn on it, but no dairy equipment.

The second farmer will lease them 40 acres for $3,000 a year. This land has a house, but the barn is a bit run down. However, it's on a pretty road and has a nice spot for a vegetable stand.

The Raitts decide they like the second place better. They will need to fix up the barn for milking. The materials will cost them about $10,000, and they can do most of the work themselves. They also need to put in milking machines, refrigeration units, and new lighting and cleaning equipment. This will cost them about $25,000.

Choosing a Location

Most parts of the country have nearby dairy farms. But dairy business owners can't start their farms just anywhere. They have to think about several things in considering a location.

- Is it too far from a milk processing plant?
- Is it too close to town?
- Is there enough land for our needs?
- Is there enough water for our needs?
- Are the right buildings and equipment there, or can we put them in pretty easily?
- Will it be easy to sell other products from there?

Is It Too Far Away?

Today refrigerated tanks and trucks have made it easier to move milk to market. But even so, the farm shouldn't be too far away from the milk processing plant. The dairy farm should also be located near a feed store and a veterinarian.

Is It Too Close?

On the other hand, you won't want to choose a location that is very close to a city. The closer you get to a town, the more the land costs. This is because close-in land may be good for houses.

People will pay more for houses than for open land--a lot more. Builders know that, so they are willing to pay a lot for land, too. Farmers are likely to find that such land costs far too much for them to afford. If they are paying more for land than the income they can bring in, they won't stay in business long.

Also, if a farm is in an area of houses, other problems may come up. People may complain about the noise or smells of a dairy farm. Animals may be hurt where there are many cars on the roads. Certain areas will have zoning restrictions preventing dairy farms from locating there anyway. Usually areas near large cities just aren't very good for dairy farms.

Is There Enough Land?

It takes a lot of land to keep a dairy herd. If you want to raise your own feed, it takes more. And everything else you raise, like eggs or vegetables, takes even more land.

Each area of the country is different, so there's no way to tell you exactly how much land you would need. Some land will support one cow per acre. Other land will support fewer cows than that. If you want to start a dairy, you need to find out what the land is like. Then you can decide how much land you need.

Is There Enough Water?

A dairy herd needs a lot of water. You'll need about 36 gallons a day for each lactating cow as well as water for other stock, for a garden, for crops if you plan to irrigate, and for household use. You may be lucky enough to find a farm served by a rural water district main. If the land you're considering is served by a well or wells, be sure there will be adequate flow throughout the year for your needs and that the water will not be polluted by the addition of new stock handling areas.

Are the Right Buildings and Equipment There?

Dairy farms need special equipment. If it isn't there, it will cost money to put it in. You need to know how much the equipment will cost before you sign a lease or buy a place.

Many of the health standards for dairy farms have to do with the way milking barns are built. They have to be very easy to clean. They also need equipment like milking machines and refrigeration tanks. Fenced pastures and corrals are needed for feeding and handling cows.

Dairy farms also need space for the other jobs done on the farm. There has to be space to grow vegetables or a poultry house for laying hens.

Storage space is important. Feed and animal health and veterinary supplies all need to be stored. If the farmer uses a tractor or other equipment, more storage space is needed. Other farm products may also need storage.

Finally, of course, farmers need a house to live in. If there's no house on the property or nearby, it will take quite a bit of money to build one!

Will It Be Easy to Sell Other Products?

If you are planning to sell other products besides milk, then you should think about some other things. If you want to sell calves or stock cattle, you should be as close as possible to buyers. If you want to sell eggs or vegetables to people who drive by, be sure your road is a popular one. You may also have to build a shed or display area for selling.

Summary

Dairy farms can be in many different places. Before picking a place, you need to think about:

- how far you are from a city or town;
- how good the land is;
- how much equipment it has; and
- what it costs.

Learning Activities

Individual Activities

1. List two reasons that being too close to a city or town can be a problem.

2. Talk to a dairy farm or dairy equipment supplier. Make a list of all the equipment needed by a dairy. Also make a list of the costs of this equipment for your area. What would the total cost be?

3. What is the average cost per acre for farmland in your area? Ask a farmer or a realtor. How much would Andy and Julie's 40 acres cost them to lease for a year in your area? How much would they have to pay to buy 40 acres?

Discussion Question

Buying enough land to start a dairy is much more costly than leasing it. Yet many farmers prefer to own their own land if they can. Why would this be true?

Group Activity

Suppose you and several of your classmates want to start a dairy farm in your area. In a small group, make a list of all the information you would need to help you pick the location. Also make a list of how you would go about getting each piece of information. Do you know of a piece of land for sale or lease that might meet your requirements? If you don't think another dairy farm could succeed in your area, explain why.

UNIT 3

Getting Money to Start

Goal: To help you plan how to get money to start a dairy farm.

Objective 1: Write a business description for a dairy farm.

Objective 2: Fill out a form showing how much money you need to start a dairy farm.

LOAN OFFICER

ANDY AND JULIE APPLY FOR A LOAN

Andy and Julie have been thinking about what they'd need to start their farm. They have made a list of the things they'd have to spend money on.

Lease of buildings and land
Remodeling of barn
Purchase of milking and dairy equipment
Purchase of 40 cows
Feed (for a year)
Other milking supplies
Vegetable seeds and gardening supplies
Salary of an employee--wages plus room and board
Veterinary and breeding costs
Power, fuel, and equipment repair
Insurance

Then they think about where they can get the money to cover these expenses. They have $25,000 they can invest in their business. Julie's parents will lend them $40,000 without interest. In addition, Andy and Julie figured they need a bank loan of about $70,000.

They go to visit their bank. They talk over their idea with the loan officer, Ms. Harris. She asks them to give her some information in writing. First, she needs a résumé of their experience and training. Then she needs a description of what the business will be like. Finally, she needs a list of starting expenses, money on hand, and loan amount needed.

Getting Money to Start

Starting any small business takes money. There are many one-time expenses. For a dairy, these include buying milking equipment and the cows for your first herd.

Usually you need a loan from a bank or a government agency. To get a loan, you need to give the loan officer three kinds of information in writing:

- personal information on yourself;
- a description of your business; and
- a statement of your starting expenses, called a "statement of financial need."

Personal information is often written in the form of a résumé. A résumé shows your education and experience and gives names of references. This module won't give any more information about résumés. It will deal with the description of a business and the statement of financial need.

Description of Your Business

Ms. Harris asked Andy and Julie to write a business description. A business description should tell the loan officer everything important about the business. A dairy farm business description has these four parts:

- kind of business and products sold;
- livestock, crops, and machinery required;
- market; and
- plans for success.

Here is a simplified version of the Raitts' business description.

"We want to start a dairy business in Farm County. We plan to start with a herd of 40 high quality cows and sell milk to the Dairy Association. We will build up our herd with some of our best calves and sell the rest. Herd quality will be constantly improved through use of the Dairy Association's artificial insemination service. We will raise our own feed, which will help us cut costs. We will sell any extra feed we raise. We will also raise vegetables in the summer and sell them along the road. We will obtain the latest in milking machinery and will keep costs low by buying other equipment second-hand.

"Our farm will be located about 20 miles from town. The milk processing plant is 10 miles away.

"The dairy association has agreed to buy all our milk. For selling calves and feed to local farmers, we will use auction markets and ads in local papers. Calves and feed have gotten good prices lately. There are several vegetable stands along our road. All of them are doing very well. Many times they run out of produce. So we think we'll do well, too. Many local townspeople drive out here for fresh produce, and many tourists pull off the highway to buy, too.

"We think our farm will do well because people want more and more milk. We will buy and breed with only very good animals. So we think our milk will be of high quality. We will also sell other products. This will bring in money for us if there ever are problems with milk sales."

Statement of Financial Need

Ms. Harris also asked Andy and Julie to fill out a statement of financial need. This form has three main parts: (1) starting expenses; (2) money on hand; and (3) loan needed. After Andy and Julie filled it out, it looked like this.

STATEMENT OF FINANCIAL NEED

Starting Expenses for the First Year		Money on Hand	
Rent & remodeling	$ 20,000	Cash on Hand	$25,000
Equipment	25,000	Gifts or Personal Loans	40,000
Livestock	48,000	TOTAL	$65,000
Feed & other milking supplies	22,000		
Seeds & gardening supplies	500		
Salary, room, & board (for 1 employee)	12,000		
Veterinary costs	1,800		
Power, fuel, & equipment repair	1,800		
Other	5,000		
TOTAL	$136,100	TOTAL STARTING EXPENSES	$136,100
		TOTAL MONEY ON HAND	65,000
		TOTAL LOAN MONEY NEEDED	$ 71,100

Starting expenses. Andy and Julie had to make several major capital investments when they started. The cost of the herd is the largest expense; then comes the cost of buying milking and other equipment. These are one-time costs they won't have again. Julie and Andy also had many operating expenses--those costs that they have to pay every month just to keep their farm running. These include rental payments, salaries, insurance, breeding service fees to the Dairy Association, and any items needed to keep their animals healthy and their machinery running.

Money on hand. Andy and Julie have saved quite a bit of money. They have $25,000 to use for starting the business. Julie's parents have lent them some money too.

A bank will want you to raise your own money as well as use its loan to start your business. It may take several years of saving to get enough money. Sometimes your family can lend you money.

Loan needed. The loan needed equals the starting expenses minus the money on hand ($136,100 - 65,000 = $71,100). It is important to think carefully about how much money you need. If you ask for too much, you may not get the loan. If you ask for too little, your business may go broke.

Summary

You need money to start a business. You will probably have to borrow from a bank or government agency. Now you know the kinds of information to give when you ask for a loan.

Learning Activities

Individual Activities

1. List three kinds of places that may lend money to start a small dairy farm.

2. What are the three parts of a statement of financial need?

3. You want to start a dairy farm. You have talked to a dairy association that will buy 5,000 gallons of milk from you every month. You will also sell part of the hay you raise to feed your cattle. No other farms in the area raise stock cattle or sell hay.

   The farm is located 15 miles from a milk processing plant. It is on good land and is already equipped as a dairy. You plan to buy very good milk cows from good breeders.

   Write a description of this business for the bank. Include all four sections of a business description.

4. Suppose you wanted to start a dairy farm. You have these expenses.

Lease for 1 year	$20,000
Milking equipment	30,000
Salary for one employee	12,000
50 head of cows	60,000
Milking supplies	5,000
Barn remodeling	20,000
Feed	35,000
Insurance	8,000
Veterinary costs	2,000
Power, fuel, & equipment repair	2,200

You have $40,000 and an investment of $10,000 from family. Fill out the statement of financial need below.

STATEMENT OF FINANCIAL NEED

Starting Expenses		Money on Hand	
Rent & remodeling	$ _____	Cash on Hand	$_____
Equipment	_____	Personal Loans	_____
Livestock	_____	TOTAL	$_____
Feed & other milking supplies	_____		
Salary	_____		
Veterinary costs	_____		
Power, fuel, & equipment repair	_____		
Other	_____		
TOTAL	$_____	TOTAL STARTING EXPENSES	$_____
		TOTAL MONEY ON HAND	_____
		TOTAL LOAN MONEY NEEDED	$_____

Discussion Questions

1. Do you think there would be differences among the costs of starting a dairy farm, a poultry and eggs farm, and a truck gardening business? Which would cost the most? Which would cost the least? Why?

2. Suppose you are a banker. A woman comes to borrow money to start a dairy farm. She grew up on a dairy farm and studied animal husbandry in high school. She has a lease arranged and has talked to the dairy association. But she only has $5,000 and asks to borrow $80,000. What would you tell her? Why?

3. Again, suppose you are a banker. A man comes to borrow money to start a dairy farm. He has never worked on a farm, but he thinks it would be fun to live in the country. He says he can hire someone to live on the farm with him who knows about the dairy business. He has

$115,000 of his own money to invest and wants to borrow $40,000. What would you tell him? Why?

Group Activity

As a class, write a list of starting expenses for a dairy farm in your area. Break into teams to do research on costs. For example, one team could talk to an insurance agent to find the cost of insurance. Another could talk to an equipment dealer about the cost of milking equipment, and so on.

UNIT 4

Being in Charge

Goal: To help you learn how to plan work for employees of a dairy farm.

Objective 1: Decide how to divide the work of the business among the workers.

Objective 2: Pick the best person to hire for a job in this business.

Objective 3: Describe one kind of training you might give your employee.

JULIE AND ANDY HIRE AN EMPLOYEE

Julie and Andy have decided that running a dairy will be too much work for the two of them. When they first start the farm, they will have a lot to do just to get it going: building, growing hay, planting the garden, selecting cows, and planning breeding. They decide to hire an employee.

There are several ways they can divide the work. The new person could do all the milking and care of the herd. Or the new person could tend the garden, while Andy and Julie did all the dairy work. Or Julie and Andy could work on everything, with the new person helping out as an assistant.

Julie wants to be in charge of the vegetable garden. Andy isn't sure what he should do. He finally decides that he should oversee everything. They decide to hire someone else who will help them in many ways, especially in the milking. The person can also help Andy and Julie on other jobs as they come along.

First, they write down a job description for the worker they want. It says what their worker needs to do. They spread the word among their friends and put an ad in the newspaper.

Three people apply for the job. Charles studied animal husbandry and agricultural production in high school and has worked on a dairy farm for one year. Alice also studied animal husbandry but has worked in the city for nine years. Tony studied agricultural products and worked on four dairy farms in two years.

The Raitts decide to talk to Charles and Tony. They like them both. But they also call the people Charles and Tony listed as references. Charles' boss says he was a good worker who knew a lot about animals. Two of Tony's bosses say he wasn't very reliable. Julie and Andy decide to hire Charles. He takes the job and comes to work on the farm. He gets a salary plus room and board in the house with them.

Being in Charge

Most small businesses hire extra workers at some time. To get good work done, you have to decide exactly what your worker should do. Then you have to find a good worker. A good worker knows how to do the job and also is reliable.

Another important part of good work is how well people get along together. Both owners and employees need to think about this.

Dividing the Work

Andy and Julie decide to divide the work so that they are in charge. Julie will handle the gardening and Andy will oversee the other products. Charles will help both of them.

They could have chosen other ways to divide the work. These are the ways.

Level of work. This is what Julie and Andy decided to do in Charles' case. It meant that Charles has to be able to help them all around the farm. But he will usually work with them, following their directions. He doesn't have to be an expert at any one thing. So he doesn't need too much training and experience.

The only thing Andy wants Charles to do on his own is the milking. But Andy will help him most of the time; Andy will also keep track of milking supplies and keep the records. On Charles' days off, Andy will do the milking. When Andy needs to be away from the farm, Charles can do the milking alone.

Kind of work. They could have decided that their worker would do all the dairy work and nothing else. The person would have had to take care of the herd, the milk, and the supplies. Andy would have worked on planning for the farm's future, growing feed, breeding, and so on.

If the Raitts had chosen to divide the work like this, their worker would need to know everything about running a dairy, from cleaning to keeping records. But the worker wouldn't need to know about other farm jobs. So the worker would need lots of training and experience in dairy operations, but none in other farm work.

Mixture of tasks. Andy and Julie could have decided to hire a worker who knew about all farm tasks. They might have wanted someone who could run the whole dairy operation, choose and buy new cows, grow the feed, and care for the garden. That way, the worker could have done any farm job without help from Andy or Julie.

If they had hired this kind of worker, they would have needed a person with a lot of training and experience.

The way you divide the work is important because it determines the kind of worker you should hire. Each way of dividing the work means a different set of skills needed by your worker. That means different kinds of training and experience needed.

To be sure of what kind of worker you need, it helps to write down a job description for each worker. A job description should list all the kinds of things the worker will do. As the owner, you should have a description, too. That way, everybody knows who does what.

Hiring a Worker

After they decided what kind of a worker they needed, Andy and Julie put an ad based on the job description in the newspaper. The ad said, "Wanted: person to do milking and help with other farm jobs. Will be

responsible for milking twice daily. Will also help in growing feed and vegetables. Should have training and at least one year's experience. Salary $700 per month plus room and board. Call 555-2875."

Using the newspaper is a good way to get workers. But not everyone who answers the ad will be a good worker. You should also ask each person about her or his training and experience. Then you can talk to the most qualified ones in person. Julie and Andy decided Alice didn't have enough experience. They talked only to Charles and Tony.

When you talk to people about the job, you should learn as much as you can about their work. The Raitts asked if Charles and Tony had done milking on their own. They asked if they had done other farm jobs. They also talked about their job. They explained the pay, the room and board, and the kinds of work they would need. Workers need to know as much as possible about the job. That way, they can decide if it's right for them or not.

The Raitts liked both Charles and Tony. But they knew they should find out about their work from others, too. They called the farmers Charles and Tony had worked for (these were their references). References are people who know you and your work. Usually references include employers you have worked for.

Tony's employers thought his work had been good. But they said he hadn't been very reliable. Andy and Julie wouldn't have known this just by talking to Tony. They were glad they had taken the time to call his former employers.

Andy and Julie went through five steps in choosing Charles to work for them. They were:

- writing a job description;
- advertising the job to people who might want to take it;
- looking at the training and experience of the people who applied;
- talking to applicants about their work and about what the job would be like; and
- checking references from employers.

They could also have had Charles give them a demonstration of his skill or knowledge. For example, they could have had Charles milk a cow or answer a question about growing feed and vegetables.

After you have hired your employee, you should help her or him learn about the job. You may need to do some extra training if the person hasn't done all the jobs you want to have done. For instance, you might need to teach your employee about caring for milking equipment. Or you might need to explain the way you keep records of milk produced. You should show your employees where things are and how you do things.

Finally, you and your employee should talk about how to keep things going well. Maybe you'll want to talk every day for a while about how the job is going. Maybe you'll want to set up a "trial period" and then talk. Both the owner and the employee have to be satisfied for things to work out right.

Summary

Being a boss takes some thought. Now you know some things to think about in dividing the work. You also know some steps to follow in hiring an employee.

Learning Activities

Individual Activities

1. List the three ways work can be divided. What is good about each way?

2. Look through newspaper want ads to see if you can find ads for dairy workers. What kinds of workers do they ask for? What kind of information do the ads include?

3. Write a job description for Andy's job. List tasks to be performed, training required, work experience required, personal qualities needed, salary, hours, and benefits offered. List as many things as you can that you think he might do. You can look ahead in this module if you want to.

4. Suppose the Raitts had wanted a worker who could take complete charge of the vegetable garden. Assume they had wanted a person with training and at least one year of experience and could pay $1,100 per month (without room and board). Write a newspaper ad to hire someone for that job.

5. List six steps in hiring a worker. Why is each step important?

6. List training your dairy farm worker might need after you hire him or her.

Discussion Questions

1. Why is it important to write a job description for an employee's job? Could doing this prevent any problems later?

2. Can you think of any other places where you could advertise for an employee?

3. Why do you think people usually lose jobs? Is it because they can't do the work, or because they can't get along with the other workers?

4. Discuss the answers to Question #1 under Individual Activities. What seems to be the best way to divide the work on a dairy farm? Is there a "best way?"

Group Activity

Suppose that Andy and Julie's farm has been operating for almost two years. One day Andy and Charles come in from milking and they're arguing. Charles says, "But I thought you were going to let me learn about running the dairy myself."

Andy says, "I hired you to do the milking and to help out on other things. That's what we told you from the beginning."

Charles says, "But I really want to learn all about the dairy business. And I could be so much more help to you."

Andy says, "You've already got more work than you can finish. And your work hasn't been all that good lately, either."

As a class, discuss the problems Andy and Charles are having. Is there just one kind of problem, or is there more than one? Can you think of other examples of the kind of problem or problems? What ways are there to solve the problem or problems? How could the problem or problems have been prevented?

UNIT 5

Buying and Keeping Track of Supplies

Goal: To help you learn to plan what supplies to order for a dairy farm and how to keep track of them.

Objective 1: Choose a supplier, decide how much you will buy, and plan a schedule for ordering supplies.

Objective 2: Figure out the amount of inventory on hand on a certain date.

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JULIE AND ANDY GET ORGANIZED

Julie and Andy are now living on the farm and working hard to get it in shape. They have finished fixing up the barn and putting in milking equipment and bulk tanks. Andy has bought about 20 head of cows and is looking for others. They have dug up a large vegetable garden, and Julie has planted it.

They need to buy quite a few supplies to get started. They need to buy feed and feed concentrate. They need to buy veterinary supplies, like syringes, and dehorning equipment. And they need to buy milking supplies, like filters and testing supplies. They also need to buy seeds and garden supplies.

They can buy the milking supplies through the dairy association. But they need to shop around for feed and veterinary supplies. There are two feed and supply stores they could buy from.

One store, Hickock's Farm Supplies, carries everything they want. It will deliver supplies. The other store, Wong's Feed and Supplies, also delivers, and its prices are a little lower than Hickock's. But it doesn't carry everything the Raitts need, and its deliveries are sometimes a little slow.

Andy and Julie decide to order from Wong's. They plan to keep careful track of their supplies and order before they get very low. That way, they'll leave plenty of time for deliveries. Anything Wong's doesn't carry they will buy at Hickock's.

Buying and Keeping Track of Supplies

In any business you will need supplies. In a dairy business you have to keep careful track of the supplies you buy and use. This is because all your supplies and other costs have to be reported to the government at tax time.

You also have to keep track of supplies so that you don't run out of anything. This is especially true when your farm is growing. If you don't watch how your supply needs are changing, you may get caught short at a bad time.

Choosing Suppliers

There are three things to think about in choosing where to buy supplies.

- The merchandise--Does the supplier carry everything you need? Can you get the brands and amounts you need?
- The services--Can you get quick, reliable delivery? If you have problems or complaints, will the supplier handle them fairly?
- The prices--Are the prices reasonable? Can you arrange to buy on credit?

Julie and Andy considered all these things in picking their supplier. They chose Wong's because it had the best prices. They knew Wong's deliveries weren't always quick, so they planned for that. They also bought from Hickock's to get everything they needed. You can see that it may be a good idea to buy from two suppliers, or from even more.

Ordering Supplies

Andy handled the first big purchase at Wong's. He planned to pay in cash the first time and then buy on credit. Mr. Wong said that the Raitts could pay bills within 60 days without interest. When Andy visited the store, he felt that he got reasonable prices and good service.

Andy's first order consisted of:

4 tons of grain at $104/ton

1,000 bales of alfalfa hay at $2/bale

1 ton of protein supplement at $240/ton

His total bill was $2,656.00

Keeping Track of Supplies

Julie and Andy will need to keep track of how fast their feed is used. A good way to do this is to use an "inventory card." The inventory card shows when supplies come in and when they are used. An inventory card for feed concentrate could look like this:

INVENTORY CARD

Item Feed concentrate

Supplier Wong's

Reorder Point 20 Order Amount 50

IN		OUT		AMOUNT REMAINING	
Date	Amount	Date	Amount	Date	Amount
July 30	50	Month of August	20	August 30	30

The card shows the name of the item and the name of the supplier. It also shows the reorder point. When the number of items left gets this low, it's time to reorder. The order amount is the usual number of those items Julie will ask for in each order.

Every time Julie gets an order in, she records the date and the number of bags she received. At the end of each month, she or Andy records the date, the number used, and the number remaining.

Summary

Of course, farmers keep many kinds of records. They need to know when they plant, when they breed their cows, and when the calves arrive. Forms for keeping these records will be discussed later in this module.

Farmers also need to keep track of the supplies they order and use. Now you know some ways to do this.

Learning Activities

Individual Activities

1. Write a paragraph on how you would go about choosing a supplier of feed for your dairy farm. Describe the information you would need to make your decision and how you would get this information.

2. Andy bought 50 bags of feed concentrate on March 1 and had 10 bags left at that time. Andy used 25 bags in March and will reorder when he has 15 left. Fill out the inventory card below for the month of March.

INVENTORY CARD

Item _____

Supplier _____

Reorder Point _____ Reorder Amount _____

IN		OUT		AMOUNT REMAINING	
Date	Amount	Date	Amount	Date	Amount

3. What are two reasons for keeping careful track of the supplies you buy and use?

Discussion Questions

1. Do you think a dairy farm would buy the same kinds and amounts of supplies all year around? What changes could there be, if any?

2. What kinds of problems could occur if a dairy farm ran out of milking supplies? Feed? Veterinary Supplies?

3. If a farmer didn't keep careful records of supply expenses, what kinds of problems could come up?

4. What are other items for which a dairy farmer must prepare an annual inventory? Why?

Group Activity

Divide into three groups and visit a feed and supply store. One group should collect cost information on dairy cattle feed, one on milking supplies, and one on veterinary supplies. If there is time, students can visit two suppliers and compare costs for different items.

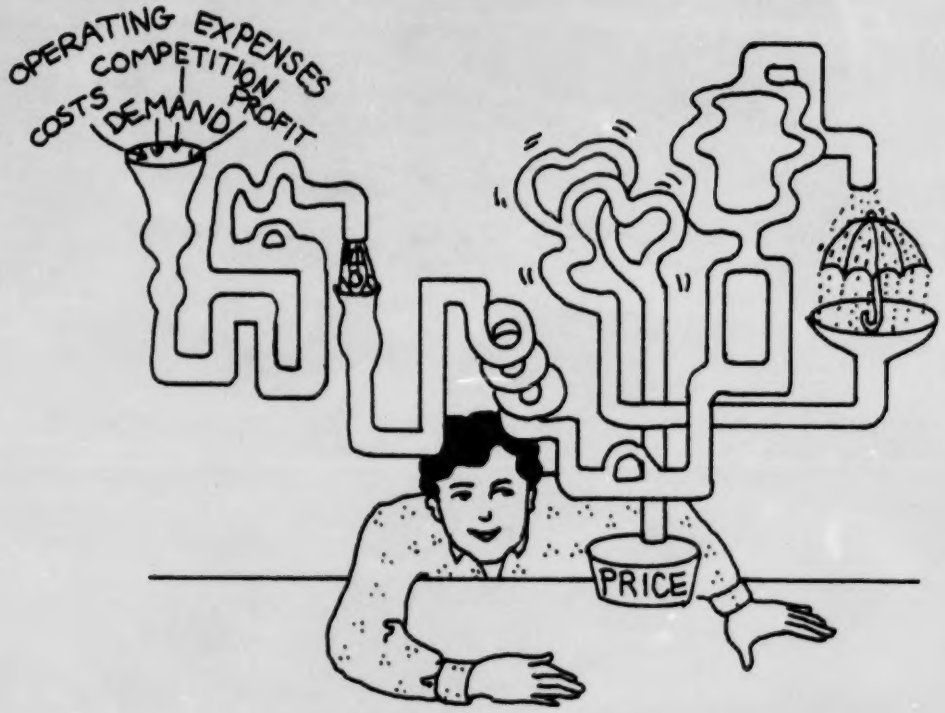
Back in class, prepare a list of all items and their costs (highest and lowest if two suppliers were visited). Also list other pros and cons of each supplier visited (related to delivery, credit terms, knowledge and friendliness of salespeople, etc.).

UNIT 6

Setting Prices

Goal: To help you learn how to set prices for your farm products.

Objective 1: Pick the best price for one item a dairy farm sells.


OPERATING EXPENSES
COMPETITION
COSTS
DEMAND
PROFIT
PRICE

ANDY AND JULIE DECIDE HOW MUCH TO CHARGE

The Raitt farm is getting underway. All but four of the cows are giving milk.

The vegetable garden is producing well. Tomatoes, peppers, squash, and corn are in big supply. So Julie is getting the display shed on the road ready.

She has been thinking about the prices she should charge for her produce. She doesn't want the farm to lose any money. So she knows she should charge enough to pay for the cost of seeds, water, and fertilizer.

But she knows those aren't all the costs that went into growing the vegetables. She should include part of Charles' time in the vegetable prices, too.

She thinks for every $1.00 of cost for seeds, water, and fertilizer, she should add on $1.00. This will pay part of the other costs. But she'd like to charge even more to help the farm make a better profit.

"What's the highest price I can charge for vegetables?" she thinks. "I have to find out what other vegetable stands are charging. I can't charge more than the others, or I'll lose customers. Also, if people just aren't very interested in some kinds of vegetables this year, I might have to lower my prices."

Setting Prices

Milk prices are not set by farmers. The U.S. government has helped to set the lowest price that farmers can be paid for milk. Though milk prices can get a little higher than the lowest price, they tend to stay close to it.

Prices for farm produce can't be set wherever the farmer would like either. In fact, farmers have very little say in prices for many of their products. Trading in farm products, called commodities, is a big and very complicated business.

At her roadside vegetable stand, Julie can set her own prices. Even here, however, she has to think about four things that would affect her prices. These things affect the price of all farm products in one way or another. This is what she has to consider:

- operating expenses of the business;
- profit needed or wanted;
- competition; and
- demand for her products.

The first two factors help Julie decide the lowest prices she can charge for her products. The last two points affect the highest price she can charge. The correct price for her products lies between the lowest and highest prices.

Operating Expenses of the Business

Julie wants to set a price for her tomatoes. She has figured out that the cost of seeds, water, and fertilizer for a basket of tomatoes is

about $0.30. (Even with an abundance of free manure, Julie must buy phosphate and potash for her garden.) So she must charge at least $0.30 a basket to get this money back.

But her garden really has cost her more than that. There are costs other than the seeds, water, and fertilizer. For example, Charles has worked in the garden, so part of his salary should show up in the price of the vegetables.

It also cost money to repair the shed. The insurance on the farm insures her garden, too. So these costs should also show up in the vegetable prices.

The prices of equipment and electricity are operating expenses. So is the price of gasoline for trucks and equipment. Julie has figured out that operating expenses cost as much as the seeds, water, and fertilizer for her vegetables. So instead of charging $0.30 a basket for her tomatoes, she will charge at least $0.60.

Profit Needed or Wanted

Profit is the amount left over after the operating expenses are paid. Profit is spent to pay taxes and expand the business. Profit is also used for the farmers to live on. They buy their food (besides what they raise themselves), clothes, and furniture out of the profit. Julie decides that she should add about $0.10 more to her boxes of tomatoes for profit.

The money brought in from the sale of all Julie's tomatoes and other farm products, called income, must be enough to pay the the operating expenses and provide some profit. If it doesn't, after a while the farm will go out of business.

Demand for Products

Julie knows that customer demand or desire to buy can be different for different vegetables. One year zucchini may be popular; the next year green peppers can be more popular. There are fashions in foods just as in clothes.

In setting prices Julie has to be aware of customer demand. She has to know about demand for the different kinds of vegetables she sells. She has to have demand in mind every time she picks or changes a price.

Competition

Julie also has to be aware of the prices her competitors are charging for the same vegetables. Her competitors are mainly other vegetable stands but also grocery stores and supermarkets. The best way for her to check other prices is to visit her competitors now and then to compare prices. She might also check the newspapers to see the prices listed. Her prices should be about the same as those of other vegetable stands--or lower. Otherwise, people won't buy her tomatoes.

It would be nice if Julie could set her prices by raising all her costs by the same proportion (for example, double them). Setting prices would be simple then. But demand and competition are different for each item. Julie can use "doubled costs" as a rule of thumb if she wants, but she will have to do some adjusting on many items.

Summary

For some items produced on a dairy farm--like milk--you won't have to decide on prices. In general, they will be decided for you by federal regulations. For other items you will have to juggle lots of information to set prices. You have to look at your operating expenses and the profit needed or wanted. You also need to know what demand is like and what competitors are charging.

Learning Activities

Individual Activities

1. List the two things that add up to the lowest price you can charge. List the two things that help you decide the highest price you can charge. Where does the right price lie?

2. List the three things profit is spent on.

Discussion Questions

1. Will a dairy farm make the same amount of money every month of the year? Why, or why not?

2. Usually a new business should charge less than its competition at first. Do you think this would be true for Julie's vegetable stand? Why, or why not?

3. How do you feel about owning a dairy farm? Would you rather be the boss and take the chance of having no salary for yourself? Or be the employee and be sure of having a steady salary?

Group Activity

List five kinds of vegetables commonly for sale in your area. Divide into three groups. Each group should check the prices for the five kinds of vegetables at a different store. Be sure the size and variety or brand are the same.

Back in class, the groups should compare prices for each vegetable. Are the prices very different? Why?

UNIT 7

Marketing Farm Products

Goal: To help you learn how dairy products get to the customer.

Objective 1: List the four kinds of workers who help get dairy products to customers.

Objective 2: Figure out what percent of the price to customers goes to the dairy farmer.

ANDY AND JULIE MARKET THEIR PRODUCTS

Andy and Julie's herd is giving about 6,000 gallons of milk a month. The dairy association buys milk from Andy and about 40 other farmers. Then it sells the milk to a large processing plant. The plant also buys milk from other associations in the state. It processes the milk and sends it on to the markets for customers to buy.

"It's sort of funny," says Andy. "When I go to a grocery store, I often look at the milk. I can tell from the label which plant processed the milk, but I never know if it came from my cows. All of the best milk is ours, of course!"

Marketing Farm Products

Most small businesses are retail businesses. That means that they sell customers products in their final form. Dairy farms, however, are not retail businesses. They "manufacture" a product that must pass through many hands before it reaches the customer.

The Marketing Process

There are several steps to be taken before milk can be sold to the customer. Marketing means getting milk from the farm to the final customer. It involves several steps.

Production. Before a product can be sold it must be produced--by a factory, a mill, or even a cow. Sometimes producing means getting together raw materials, like iron and coal for making steel. The producer uses these raw materials to make the product.

Processing. Processors take basic products and put them into a form the customer can use. For example, an automobile factory uses steel and other products to make cars and trucks.

Wholesaling. The wholesaler gathers finished products from many places and sells them to the retail business. The main purpose of wholesaling is to provide an easy source of products for the retailer. The wholesaler also takes care of moving the products to the retailer.

Sometimes if a processing operation is very large, the processors will do their own wholesaling. But for smaller processing firms, it is easier and more efficient to use a separate wholesale firm.

Retailing. Retail businesses operate close to customers. They save customers time and trouble by bringing products within easy reach.

Marketing Milk

Marketing milk is like marketing any other product. In this case, the dairy farm is the producer.

The producer. The production of milk uses raw materials--alfalfa, grain, water, and other foods. The "factory" is the cow, and the product is fluid milk. Andy's cows produce 6,000 gallons of milk a month.

The processor. The group that processes the milk is the milk processing plant. Sometimes this is owned by the dairy association. Sometimes the association sells and delivers milk to a plant owned by others.

In the processing plant the fluid milk is put into a form customers can use. Fluid milk is treated in many ways. It is pasteurized to make it pure. Then it may be homogenized, blended, and packaged in bottles or cartons.

Fluid milk may also be processed into other things. It may be made into cheese, butter, yogurt, dried milk, and other products. All of these products are in final form so that customers can buy them.

The wholesaler. Many milk processing plants are also wholesalers. They have large refrigerated trucks so they can deliver dairy products to food stores. The trucks go out every day from the plant.

Some plants have storage areas, called distribution points or distributors. The dairy products don't stay at the plant but are kept at these distribution points. Deliveries to food stores are made from there.

If the distribution point doesn't belong to the processing plant--if it's a separate business--then it is a wholesale firm. Its whole busi-

ness is simply gathering products from processors and getting them to retailers.

The retailer. Many kinds of retailers sell dairy products. Supermarkets, corner grocery stores, and restaurants are all retail businesses that sell dairy products. These businesses bring the products to locations where customers want them.

You can see that it takes a lot of steps to get products to customers. These marketing steps are very important. Imagine having to drive many miles to a dairy farm every time you wanted to buy milk. Without these four marketing steps, that's what you'd have to do!

The Price of Milk

You know that the federal government plays a part in setting prices of farmers' milk. But farmers aren't the only ones who get paid for dairy products. All the people who work in the processing, wholesaling, and retailing of milk also need paychecks. They all perform useful work in getting dairy products from producer to customer.

How much does each step cost? Generally, dairy farmers get about 48 cents out of every dollar the customer spends on milk. The processing plant gets about 28 cents. The wholesaler (or the processing plant if it does its own wholesaling) gets about 2 cents. The food store owner gets about 22 cents.

Summary

A dairy farm is only the first step in the process of getting dairy products from producer to customer. Now you know all the steps dairy products go through. You also know how much of the customer's dollar is spent to pay for each step along the way.

Learning Activities

Individual Activities

1. List the four marketing steps that dairy products go through.

2. You know that the dairy farmer gets 48% of all money spent on dairy products. If a half gallon of milk costs the customer 80 cents, how much goes to the farmer?

3. A half gallon of milk costs the customer 85 cents. The farmer gets 41 cents, the processing plant gets 24 cents, and the wholesaler gets 2 cents. Who gets the rest? How much does that firm get? What percentage of the price is this amount?

4. The price paid for milk is the same for all farmers in an area. Do all customers pay the same price for milk? Check the price of a half gallon of milk and a pound of butter at three different places. Are they different?

Discussion Questions

1. The customer pays about twice the farmer's cost when he or she takes home a quart of milk. Is this fair? Why, or why not?

2. Marketing includes more than just distribution. It includes trying to get customers to buy products. How is this done? Who tries to get customers to buy dairy products?

Group Activity

Ask a dairy association representative to speak to the class about the marketing process for dairy products in your area. Or visit a milk processing plant and make a list of processing steps for different products.

UNIT 8

Keeping Farm Records

Goal: To help you learn how to keep farm records for a dairy business.

Objective 1: Complete a record for milk sold in one month.

Objective 2: Fill out a record of expenses for one kind of supply.

Objective 3: Fill out a stock record for one cow.

ANDY AND JULIE KEEP RECORDS

Andy and Julie's herd is producing about 440 hundredweight (cwt.) a month. Every two days the milk tanker truck comes to pick up the milk.

The dairy association keeps records of how much milk the truck picks up. Once a week it sends Andy a check to pay for the milk. Andy keeps records of the payments he gets. Julie keeps records of her sales of vegetables too.

Andy also keeps records on every animal in the herd. He wants to know when each cow is bred, when she calves, when she begins to give milk, and when she stops producing. He also keeps track of shots and other medical care. He is planning for how much milk the herd can produce next year.

Keeping Farm Records

One of the most important things a dairy farmer has to do is to keep good records. You have to know how much milk you're selling and how much money is coming in and going out. This is how you know if your business is making or losing money.

There are other reasons to keep good records. You have to report income and expenses to the government to pay taxes. Good records also help you decide if you should expand your business or cut it back.

You also need to know what is happening to the herd. It's important to keep records of when cows are bred, when they calve, and when they produce milk. This helps you plan to keep production steady and meet your quota each month.

Record of Milk Sales

Andy uses the following form to keep track of milk income that comes in weekly from the dairy association.

RECORD OF MILK INCOME			
Date of Payment	Amount of Milk (cwt.)	Price per cwt.	Amount Received
Week of 4/1	110.0	$12.00	$1,320.00
Week of 4/8	110.1	"	1,321.20
Week of 4/15	110.2	"	1,322.40

Andy has filled out the form for the first three weeks in April. He has recorded the amount of milk the dairy association picked up each week. He has also recorded the price per cwt. and the money he has received at the end of each week.

He gives these records to his accountant, Ms. Kaplan. She keeps track of all the farm's financial records and does the taxes.

Record of Expenses

Ms. Kaplan also needs records of the farm's expenses. Andy keeps copies of all the bills and sales slips he receives when he buys feed and other supplies.

He fills out a separate "record of expense" for each kind of expense he has. Keeping a record for each kind of expense is simpler than keeping one record for everything. Below is his record of expenses for feed for April.

RECORD OF EXPENSES FOR FEED				
Date	Item Purchased	Cost	Amount Paid	Balance
4/8	1 ton soybean meal	$240.00	--	$240.00
4/25	4 tons grain	$416.00	--	$656.00
4/30	Payment	--	$500.00	$156.00

Every time Andy pays for feed he records the date, the item, and the cost on the form. Sometimes he pays cash when the feed is delivered. But usually he pays the supplier at the end of the month. He records his payments under "Amount Paid." Then he puts in the balance so he knows how much he still owes.

Records on the Herd

Since cows don't give milk all the time, Andy has to plan milk production carefully. He breeds his cows once a year. After they calve they begin to give milk. Then he milks them for about ten months. They are dry for about two months. To keep milk production even, Andy has to breed the cows at different times. This is why he needs to keep records of dates of breeding, drying, and calving. He also keeps track of what medical care a cow has had. The form he uses looks like this:

STOCK RECORD				
Cow	Date Bred	Date Dry	Date Calved	Veterinary Care
#1	Oct. 5	May 20	July 10	Vaccination, Feb. 15 Milk fever treatment, July 12
#2	Feb. 24	Oct. 3	Nov. 20	Vaccination, Feb. 15

Summary

Keeping farm records is important. You need records of your income and expenses. You also need records on the herd. These records help keep your dairy running smoothly. Financial records are periodically summarized and organized into a form that shows how the business is doing, such as a balance sheet and a profit/loss statement. You will learn about profit/loss statements in the next unit. If you do go into business for yourself, get the advice of a bookkeeper or accountant about how to complete a balance sheet.

Learning Activities

Individual Activities

1. List three reasons for keeping good records of income and expenses. List one reason for keeping records on the herd.

2. During May the dairy association picks up and pays for milk from your dairy as follows:

Week of May 1	110.1 cwt.
Week of May 8	110.0 cwt.
Week of May 15	110.3 cwt.

The price of milk is $12.00 per hundredweight (cwt.). Fill out the record of milk income below, showing the balance after each delivery and payment.

RECORD OF MILK INCOME			
Date of Payment	Amount of Milk (cwt.)	Price per cwt.	Amount Received

3. In May, Andy bought two tons of grain and 500 bales of alfalfa hay. He bought the grain on May 7 for $208.00. He bought the hay on May 18 for $1,000.00. He paid the whole bill on May 30. Fill out the record of expenses for feed on the next page, showing the balance after each purchase and payment.

RECORD OF EXPENSES FOR FEED				
Date	Item Purchased	Cost	Amount Paid	Balance

4. Andy has two heifers that have recently calved for the first time. The first was bred on June 10 and calved on March 15. The second was bred on July 8 and calved April 2. They both were dry two months before calving. Each was vaccinated February 10. Fill out the stock record below for the two cows.

STOCK RECORD				
Cow	Date Bred	Date Dry	Date Calved	Veterinary Care
#43				
#44				

5. Talk to a dairy farmer about what kinds of records he or she keeps. Try to get copies of the forms or write down what kinds of information the farmer keeps.

Discussion Questions

1. Do you think all dairy farmers use records like the ones discussed in this unit?

2. Do you think dairy farmers who don't use records like this could have problems? What kinds of problems could they have?

Group Activity

Students should do research on the use of computers in farming, especially in recordkeeping. They can talk to a computer company, a large dairy operation, and a modern processing plant. They can report on the uses of computers today and the uses planned for the future.

UNIT 9

Keeping Your Business Successful

Goal: To help you learn how to keep a dairy farm sucessful.

Objective 1: Figure out the net profit, profit ratio, and expense ratio for a dairy farm.

Objective 2: State one way a dairy farm could increase its profits.

Objective 3: State one way a dairy farm could change its services to increase sales.

JULIE AND ANDY CHECK THEIR COMPANY'S HEALTH

The Raitts' farm has been operating for almost two years. Money is a little tight on the farm. Last month they had trouble paying all their bills. They have put off buying new equipment until they have more money.

They decide to talk to Ms. Kaplan, their accountant. She has kept all their records of business income and expenses. On the phone they tell her they want to talk about how the business is doing.

When they arrive at her office, Ms. Kaplan tells them, "I have figured some totals for you. You had revenues of $70,000 and $75,000 in Years 1 and 2. You made the same amount of profit in both years--$16,600. Luckily, Julie has another income from her quilting. You have to pay taxes out of that, you know. I think you need to work to get your profits higher."

"Our expenses have gone up faster than our income," Julie says. "And unfortunately, milk prices haven't risen as fast."

"Can you think of ways to increase your income or cut your expenses without hurting the business?" Ms. Kaplan asks. "You wouldn't want to cut corners in the wrong places. That could cause you problems later on."

"I know," says Andy. "Julie and I will talk it over We'll talk to Charles too. I'm sure we can find the best way to increase profits."

Keeping Your Business Successful

A dairy owner can never stop trying to improve his or her business. Even though dairying is more steady than many other farm businesses, things are always changing. New ways of milking or testing may come out, and farmers must decide whether to use them. Customer demand for milk may change, and prices may change. The weather may hurt or help production of feed and other farm products.

Dairy owners have to keep careful track of changes like these. They also have to know exactly how their business is doing so they can make changes to keep up to date.

Profit and Loss Statement

A profit and loss statement shows total income and total expenses over a period of time, usually a year. The Raitts' accountant, Ms. Kaplan, uses their records of income and expenses to fill out profit and loss statements. The statements include all their income and expenses for all their products.

Often a profit and loss statement shows figures for the last two years so that changes can be seen. The two-year profit and loss statement for Andy and Julie's farm looks like this.

PROFIT/LOSS STATEMENT

	Year 1		Year 2	
	$	%	$	%
Revenues	$70,000	100%	$75,000	100%
Expenses				
Feed	24,000		25,000	
Milking & Other Supplies	1,800		2,300	
Veterinary Costs	1,800		2,300	
Power, Fuel, & Equipment Repair	1,800		2,800	
Rent	3,000		3,000	
Salary (for 1 employee)	12,000		13,000	
Other	9,000		10,000	
TOTAL	$53,400	76%	58,400	78%
Net Profit	$16,600	24%	$16,600	22%

Ms. Kaplan has filled in the dollar figures for the farm's first two years on this statement. At the top for each year is the total of revenues, or income. This includes money taken in from the sale of milk, calves, and vegetables. Below that is the total of expenses for the year.

The Raitts' biggest expense was feed for the herd. Insurance, interest, depreciation, interest on their loan, and legal fees (listed under "other") were also fairly high. The money listed under salary refers to Charles' wages and room and board. Julie and Andy don't really have a salary. They pay their own expenses out of the net profit.

Net profit is the difference between total revenue and total expenses in a year. Net profit is used to pay the owners' salaries and taxes and to make improvements on the farm. For example, if Andy decided to add more space to the barn, he would use part of their net profit to pay for it.

Andy and Julie's profits are quite low, but they hope to improve their profits as time goes along. They notice, however, that in Year 2 they did not do this. Their profit (in dollars) was the same as in Year 1, even though their revenues increased. Julie and Andy decide to look at their profit ratios to see what they were like.

Profit Ratio and Expense Ratio

An easy way to see the whole picture of a business is to figure the profit ratio and the expense ratio for each year.

The profit ratio for any year is the net profit divided by the revenues. For year 1 of the Raitts' business it's $16,600 divided by $70,000, or 24%. This number shows what percent of income they got to keep after paying expenses.

The expense ratio is the expenses divided by the revenues. For Year 1 it's $53,400 divided by $70,000, or 76%. The profit ratio and the expense ratio add up to 100%.

For Year 1 the Raitts' profit ratio was 24% and for Year 2 it was 22%. Although they brought in more revenues in the second year, they kept a smaller percentage of it in profits. In other words, they spent a greater percentage of their revenues on expenses. A healthy dairy farm business keeps the same profit ratio every year and slowly increases its revenues and profit dollars. Profit ratios are about the same for all small dairy farms.

Increasing Net Profits

To increase net profits, a business must do one of two things:

- reduce expenses; or
- increase revenues.

Reducing expenses can be done in several ways. The Raitts could look for suppliers who sell cheaper feed and supplies. They could try to save money by raising more kinds of feed and buying less. They could lay Charles off and try to do all the work themselves. In cutting expenses, of course, they'd have to be careful that they could still run the farm successfully.

Increasing revenues can also be done in several ways. Julie could make the vegetable garden twice as big or raise her vegetable prices.

Again they'll have to plan carefully. More land planted to feed or vegetables might be more work than they can do or demand more equipment than they can afford. Trying to intensify production of more feed and vegetables from the land now in cultivation by using more chemical fertilizers, may, in the long run, deplete the soil. If they raise prices, they have to think about demand and competition.

Julie and Andy talk about what they could do. They decide that they will try to increase feed production. Since Charles wants to take some classes anyway, they will decrease his responsibilities and salary. Andy thinks he can handle a heavier work load.

Julie has another idea too. She knows that purebred sheep are worth more and more money now and she has read of recent studies recommending following cattle in a pasture with sheep for more efficient use of forage. She decides to put aside some of the income from vegetable sales to buy some lambs.

These changes can't be made right away. They will take some time. Andy and Julie hope that making these changes will mean bigger profits and a healthier business.

Summary

Keeping a dairy business successful isn't easy. The owners have to watch their income, expenses, and profits carefully. They have to know how these items are changing. They have to plan the best way to change their business to keep revenues and profits up, and expenses down.

Learning Activities

Individual Activities

1. Figure out the net profit, profit ratio, and expense ratio for the following dairy farm with 60 cows.

PROFIT/LOSS STATEMENT

	Year 2 $	Year 2 %
Revenues	$96,000	100%
Expenses		
Feed	30,000	
Milking & Other Supplies	2,800	
Veterinary Costs	2,500	
Power, Fuel, & Equipment Repair	3,500	
Rent	5,200	
Salary (for 1 employee)	14,000	
Other	14,000	
TOTAL	72,000	___%
Net Profit	$_____	___%

2. List two ways to increase revenues. List three ways to reduce expenses. Which of these ways would increase net profits?

Discussion Questions

1. Andy and Julie did not make a lot of money from their business in some months. What other reasons could they have for wanting to keep their dairy business going?

2. Suppose that Year 2 had been a better year for the dairy farm than Year 1. What do you think they might have done?

Group Activity

Using all the information you have gotten about your area during these units, plan a small dairy farm business. The class can work in six teams. The teams should work on the following topics:

- Planning the dairy farm (Unit 1);
- Choosing a location (Unit 2);
- Getting money to start (Unit 3);
- Being in charge (Unit 4);
- Setting prices (Unit 6); and
- Marketing dairy products (Unit 7).

The class will also have to work together as a whole, since each team needs to know something about what the others are doing.

SUMMARY

This module has been about owning a dairy business. People with training in animal husbandry and production agriculture can start dairy businesses. They may also be able to produce and sell other farm products "on the side."

To start a dairy farm, you need to do lots of planning. First you have to be sure that owning the business is right for you. Then you have to decide whether to grow other farm products and what legal requirements to meet.

To pick a good location, you have to be sure your farm is not too far from the processing plant or too close to a city. You have to have enough good land and be able to pay for leasing or buying it. Then you have to get money to start. That means showing a banker that your plans are good ones.

Being in charge means knowing what needs to be done and when workers are needed. Then you must choose suppliers of feed and equipment and keep track of the supplies you use.

Milk prices are fixed by the government. Setting prices on certain other agricultural products means figuring out the lowest price you can charge to meet your expenses and also the highest price you can charge and still be competitive. To do this you need information on your expenses and on your competition's prices.

Marketing refers to the steps required in getting milk and other farm products to consumers. Marketing includes producing, processing, wholesaling, and retailing.

You should keep good records of income and expenses so you will know how the business is doing. You also need to keep records on your herd and its milk production. Then you can decide if you can expand your business or if you need to cut it back.

In order to own and operate a successful dairy farm you need training in animal husbandry and production agriculture, work experience, and the special business management skills we have covered in this module. If you have not had courses in animal husbandry or production agriculture, you should take some before deciding to own a dairy farm. You can learn business management skills through business classes, experience, or by using the advice and example of an expert.

You may not make a lot of money by owning a dairy farm. However, you will have the personal satisfaction of being responsible for your business and making your own decisions. Think about how important these things are to you when considering whether you should start your own dairy farm.

QUIZ

1. List three personal qualities the owner of a dairy farm might have.
   a.
   b.
   c.

2. To whom does a dairy farm sell its milk?
   a. Directly to customers in stores
   b. To a dairy association or processing plant
   c. To wholesalers

3. List three things to think about in deciding <u>where</u> to start a dairy farm.
   a.
   b.
   c.

4. If you wanted to start a small dairy farm business, which of the following locations would you choose?
   ____ a. A farm for lease at $10,000/year with no improvements needed
   ____ b. A farm for sale at $350,000 with no improvements needed
   ____ c. A farm for lease at $8,000/year with no barn

5. List the four parts of a business description for a dairy farm.
   a.
   b.
   c.
   d.

6. You need $100,000 to start your farm. You have $14,000 of your own money. The bank will lend you 80% of the money you need. How much more do you need to get as a loan or investment from family or friends?

____ a. $86,000

____ b. $11,200

____ c. $ 6,000

7. The Geiger family owns a small dairy farm. Mr. Geiger has been a dairy farmer for 15 years. His daughter Joan has just finished high school; she studied animal husbandry. Mrs. Geiger takes care of the books and raises vegetables to sell at a little market in town. They need lots of help with the herd and want to hire a fourth person. What should they do?

____ a. Hire a milker and have both Joan and the new person help Mr. Geiger

____ b. Hire someone to help Mr. Geiger and have Joan help her mother with raising vegetables

____ c. Hire an assistant bookkeeper

8. You decide to hire someone to do the milking, keep records, and buy supplies. Which person would you choose?

____ a. Joe, who studied animal husbandry in high school but has not worked at it in 12 years.

____ b. Annie, who worked for a dairy for three years, wants a very high salary, and has good references

____ c. Jim, who worked for a dairy for three years, has good references and is studying business through a correspondence school

9. You have hired someone to help you do the milking. List one kind of training your new employee might need.

_____

10. You have been buying feed and supplies from Wong's. You buy 80 bags of feed concentrate at a time. You reorder when you get to 20 bags. Your herd has increased from 40 to 50 head. Which of the following should you do?

____ a. Find a different supplier

____ b. Order 100 bags at a time and leave your reorder point at 20

____ c. Order 80 boxes at a time but change your reorder point to 10

11. You are selling fruit from the orchard on your farm. The cherries cost you $.40 a pound to raise. Your operating expenses come to $.30 a pound. A nearby fruit stand sell cherries for $.80 a pound. What should you charge?

_____a. $.70 a pound

_____b. $.80 a pound

_____c. $.90 a pound

12. List the four kinds of workers who help get dairy products to customers.

a.

b.

c.

d.

13. If the farmer is getting $0.75 a gallon for milk and it sells at the store for $1.67, what percentage of a customer's money does the farmer get?

_____a. 50%

_____b. 48%

_____c. 45%

14. The dairy association truck picks up 110 cwt. of milk from you every week in May. The association pays you $12.00/cwt. for milk. How much does it pay you for May?

_____a. $5250

_____b. $5280

_____c. $5625

15. In January Andy bought two tons of grain and one ton of soybean meal. He bought the grain January 10 for $208. He bought the meal on January 26 for $240. He paid the whole bill on January 30. Fill out the Record of Expenses for Feed below, showing the balance after each purchase and payment.

RECORD OF EXPENSES FOR FEED				
Date	Item Purchased	Cost	Amount Paid	Balance

16. List at least three kinds of information you need to keep on every cow.

a.

b.

c.

17. A dairy farm brought in $200,000 in revenues last year and spend $150,000 on feed, supplies, and other expenses. What was the net profit and the profit ratio for this farm?

18. List two ways a dairy farm can increase its net profits.

a. _____

b. _____

19. A dairy farm sells milk to the dairy association and grows apples. List one new product the farm could produce.

_____

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PROJECT PRODUCTS

Entrepreneurship Training Components

Vocational Discipline	Module Number and Title
General	Module 1 - Getting Down to Business: What's It All About?
Agriculture	Module 2 - Farm Equipment Repair
	Module 3 - Tree Service
	Module 4 - Garden Center
	Module 5 - Fertilizer and Pesticide Service
	Module 6 - Dairy Farming
Marketing and Distribution	Module 7 - Apparel Store
	Module 8 - Specialty Food Store
	Module 9 - Travel Agency
	Module 10 - Bicycle Store
	Module 11 - Flower and Plant Store
	Module 12 - Business and Personal Service
	Module 13 - Innkeeping
Health	Module 14 - Nursing Service
	Module 15 - Wheelchair Transportation Service
	Module 16 - Health Spa
Business and Office	Module 17 - Answering Service
	Module 18 - Secretarial Service
	Module 19 - Bookkeeping Service
	Module 20 - Software Design Company
	Module 21 - Word Processing Service
Occupational Home Economics	Module 22 - Restaurant Business
	Module 23 - Day Care Center
	Module 24 - Housecleaning Service
	Module 25 - Sewing Service
	Module 26 - Home Attendant Service
Technical	Module 27 - Guard Service
	Module 28 - Pest Control Service
	Module 29 - Energy Specialist Service
Trades and Industry	Module 30 - Hair Styling Shop
	Module 31 - Auto Repair Shop
	Module 32 - Welding Business
	Module 33 - Construction Electrician Business
	Module 34 - Carpentry Business
	Module 35 - Plumbing Business
	Module 36 - Air Conditioning and Heating Service

Related Resources

Resource Guide of Existing Entrepreneurship Materials

Handbook on Utilization of the Entrepreneurship Training Components